

REMARKS/ARGUMENTS

Claims 1-52, 55-56, 59-63, 65, and 67-72 are pending.

The Office Action rejected claims 1, 5-20, 24-29, 31-39, 43-48, 50-52, 55-56, 59-62, and 69-72 under 35 U.S.C. §103(a) as being unpatentable over Hetzler, U.S. Patent No. 5,954,820, in view of Springer, U.S. Patent No. 5,936,608, and further in view of paragraphs 3-4 of the present application. The rejection is respectfully traversed.

It is noted that the Examiner indicated in a February 10, 2009 telephone conference with Applicant's representative that she intended to reject claims 1, 5-20, 24-29, 31-39, 43-48, 50-52, 55-56, 59-62, and 69-72 over Hetzler, in view of Springer, and further in view of paragraphs 3-4 of the present application, although paragraph 2 of the Office Action indicates that these claims are rejected over Hetzler in view of Springer, and further in view of Zenda, U.S. 5,386,577. She further stated that Zenda is not applied. It is further noted that paragraph 2 of the Office Action rejects the claims over Hetzler, Springer, and paragraphs 3-4 of the present application. However, the text of the rejection appears to reject independent claims 1 and 13 (and claim 31) over Hetzler, Springer, and paragraphs 3-4 of the present application, while it appears to reject independent claim 14 (and claims 32 and 33) merely over Hetzler and Springer. Clarification is respectfully requested.

Independent claim 1 recites a method for adjusting a brightness of a display screen of a display of a system. The method comprises determining whether a processor is being powered by an internal power source; switching the system into a power conservation mode if the

processor is being powered by an internal power source; determining whether there is a user signal input into the system; switching the system into an IDLE mode if there is no user signal input; determining whether at least one of certain display related processes is running when in the IDLE mode; maintaining the brightness of the display screen and periodically checking whether at least one of the certain display related processes is running, if at least one of the certain display related processes is running; checking processor usage if at least one of the certain display related processes is not running; and adjusting the brightness of the display screen when in the IDLE mode based on processor usage without turning the display screen off. Hetzler, Springer, and paragraphs 3-4 of the present application, taken alone or in combination, fail to disclose or suggest all of such features, or the claimed combination of independent claim 1.

That is, the Examiner acknowledged that "Hetzler does not teach determining whether a processor is being powered by an internal power source and switching the system into a power conservation mode if the processor is being powered by an internal power source." The Examiner further acknowledged that "Hetzler also does not teach where the brightness is adjusted without turning the display screen off." Additionally, the Examiner acknowledged that "Hetzler does not teach maintaining the brightness of the display screen and periodically checking whether at least one of the certain display related processes is running, if at least one of the certain display related processes is running; checking processor usage if at least one of the certain display related processes is not running and where the brightness is adjusted without turning the display screen off."

The Examiner then asserted that paragraphs 3-4 of the present application teach “where the CPU determines whether the power supplied to the system is supplied through an external power source such as an AC adapter or an internal power source, such as a battery,” and “in paragraph 4, where the system is switched into a power conservation mode and reduces the luminance or brightness of the display without turning the display off.” The Examiner then concluded that “[i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of determining whether a processor is being powered by an internal power source; and switching the system into a power conservation mode if the processor is being powered by an internal power source, specifically, where the luminance is lowered when powered by a battery in order to conserve power without turning the display off as taught by [paragraphs 3-4 of the present application] into the prior art of Hetzler in order to increase the life of the internal power source.”

Further, the Examiner stated that:

Springer teaches in col. 4, lines 10-28 and col. 3, lines 15-25, where the display control system has operating rules module which identifies one or more predetermined conditions of operating system events or messages which require a variation in the brightness of visual object[s] displayed on the display. The operating events are monitored and filtered for the predetermined conditions by an activity monitoring module. The manager module directs the variation of brightness based on the activity monitoring.

The Examiner then concluded that “[i]t would have been obvious to one of ordinary skill at the time the invention was made to include the feature of maintaining the brightness of the display screen and periodically checking whether at least one of the certain display related processes is

Reply to Office Action of October 28, 2008

running, if at least one of the certain display related processes is running; checking processor usage if at least one of the certain display related processes is not running and where the brightness is adjusted without turning the display screen off as taught by Springer into the display system of Hetzler as by reducing brightness, power consumption is reduced...and prevents the user from having to provide an input to power on the display.”

However, the claimed invention is directed to a method for adjusting the brightness of a display screen of a display of a system. The claimed method and apparatus were designed to avoid the problem of when a user watches a movie on a computer by, for example, executing a video file or an Internet broadcast, because there are no inputs from the mouse or keyboard, the operating system determines the computer is not in use, and thus, dims the display screen such that the user can no longer watch the movie. Thus, the claimed methods and apparatus monitor “display related processes” defined in the present application as “any display intensive use of the computer where the user is watching a display screen of the apparatus.” The present application further states that “[d]isplay related processes may include watching a movie on the display screen, such as by playing a CD-ROM (Compact Disk Read Only Memory), a DVD (Digital Video Disk), a MPEG (Moving Pictures Experts Group) file, downloading a video file from the Internet or an Internet broadcast, or similar type functions.” None of the applied references addresses this issue or discloses or suggests monitoring “display related processes.”

That is, Hetzler merely discloses a portable computer with adaptive demand-driven power management. Hetzler teaches entering power-save modes based on access history. That

is, actual user workload is used to determine which power-save mode is most appropriate and when to enter it. See col. 7, lines 43-45 of Hetzler. A decision to enter a specific power-save mode is influenced by recent access patterns for a component. See col. 8, lines 30-33 of Hetzler. Access patterns “may be characterized in terms of frequencies, i.e., the rate at which component accesses occur, and a distinction of frequencies may be determined for the access history.” See col. 8, lines 37-40 of Hetzler. The recent access patterns are then utilized to determine when to enter a power save mode. Thus, Hetzler determines whether to enter a power-save mode based on a statistical analysis of recent access history.

Nowhere does Hetzler disclose or suggest determining whether at least one of certain display related processes is running when in the IDLE mode, with respect to independent claim 1. Hetzler specifically states in the Abstract that “[i]n the case of the display system component, such as the LCD display panel, because the access occurs when the user is watching the display panel and is thus not possible to measure directly, the accesses are measured indirectly from the keyboard and/or pointing device activity.” Keyboard and pointing device accesses or uses are not “display related processes” and do not “run.” Moreover, Hetzler specifically states in col. 2, line 63-col. 3, line 7 that:

The component or system keeps track of the access patterns. In the case of some components, such as the CD-ROM, it is possible to directly measure accesses. This involves keeping a history of accesses of that component, such as reading data or moving the actuator. In the case of other components, it is more difficult to directly measure access of the component. For the display system, such as the LCD panel, the access occurs when the user is watching it. This type of access is very difficult to measure directly, but can be estimated from keyboard activity (i.e. keystrokes and mouse pointer movements).

Thus, Hetzler specifically does not monitor "display related processes," but rather, makes an estimate using keystrokes and mouse pointer movements. However, where a user is watching a movie, there would be no keystrokes or mouse pointer movements.

Further, Hetzler teaches monitoring individual components and determining whether to enter various power modes based on a statistical analysis of recent access history. Hetzler does not correspond the various components to the display and control a brightness level of the display based on whether the components are running. Again, Hetzler specifically states in col. 8, lines 17-19, that "for LCD display power management, the keyboard and pointing input are used to measure viewing the display."

Furthermore, Springer discloses a computer system including a display control system. The Springer system is configured for an electron flat panel display monitor. Springer teaches identifying one or more predetermined conditions of operating system events or messages which require a variation in the brightness of visual objects displayed on the electron beam flat panel display monitor 80. Springer further teaches that the operating system events are monitored and filtered for the predetermined conditions by an activity monitoring module and in the event that a predetermined condition is found to exist, the activity monitoring module transmits instructions to a palette manager module to vary the brightness of selected visual objects using a graphics controller 145 of the computer system 100. Therefore, Springer teaches varying the brightness of individual graphic components on a display screen. Thus, Springer also fails to disclose or suggest determining whether at least one of certain display related processes is

running when in the IDLE mode, with respect to independent claim 1. Further, Springer does not disclose or suggest maintaining the brightness of the display screen and periodically checking whether at least one of the certain display related processes is running, if at least one of the certain display related processes is running. Furthermore, Springer does not even address processor usage, and thus, does not disclose or suggest checking processor usage if at least one of the certain display related processes is not running; and adjusting the brightness of the display screen when in the IDLE mode based on processor usage without turning the display screen off.

Additionally, the Examiner's piecemeal rejection of independent claim 1 is clearly based on impermissible hindsight gleaned from Applicant's own disclosure.

Independent claim 13 recites a method for reducing electrical power consumed by a processor controlled display screen. The method comprises checking display screen usage by determining whether a certain device related to screen operation is in use; maintaining a brightness of the display screen if the certain device is in use, and checking the display usage by determining whether the certain device is in use after a predetermined delay; and reducing the brightness of the display screen or turning the display screen off if the certain device is not in use. Independent claim 31 recites similar features. Hetzler, Springer, and paragraphs 3-4 of the present application, taken alone or in combination, fail to disclose or suggest all of such features, or the respective claimed combinations of independent claims 13 and 31.

That is, as set forth above, neither Hetzler nor Springer nor paragraphs 3-4 of the present application discloses or suggests checking display screen usage by determining whether a certain

device related to screen operation is in use. As set forth above, Hetzler teaches using keyboard activity (i.e., keystrokes and mouse pointer movements) to estimate display system use. Further, neither Hetzler nor Springer nor paragraphs 3-4 of the present application discloses or suggests maintaining a brightness of the display screen if the certain device is in use, and checking the display usage by determining whether the certain device is in use after a predetermined delay; and reducing the brightness of the display screen or turning the display screen off if the certain device is not in use. As set forth above, Springer merely teaches varying the brightness of individual graphic components on a display screen.

Additionally, the Examiner's piecemeal rejection of independent claims 13 and 31 is clearly based on impermissible hindsight gleaned from Applicant's own disclosure.

Independent claim 14 recites a computer-readable medium having stored thereon a sequence of computer executable instructions which, when executed by a processor, cause the processor to perform the steps of monitoring a system to determine whether at least one of certain display related processes is running; maintaining a brightness of a display screen of a display and periodically checking whether at least one of the certain display related processes is running if at least one of the certain display related processes is running; and reducing the brightness of the display screen if at least one of the certain display related processes is not running without turning the display screen off. Independent claims 32 and 33 recite similar features. Hetzler, Springer, and paragraphs 3-4 of the present application, taken alone or in combination, fail to

disclose or suggest all of such features, or the respective claimed combinations of independent claims 14, 32, and 33.

That is, as set forth above, neither Hetzler nor Springer nor paragraphs 3-4 of the present application discloses or suggests monitoring a system to determine whether at least one of certain display related processes is running. As set forth above, Hetzler teaches using keyboard activity (i.e., keystrokes and mouse pointer movements) to estimate display system use. Further, neither Hetzler nor Springer nor paragraphs 3-4 of the present application discloses or suggests maintaining a brightness of a display screen of a display and periodically checking whether at least one of the certain display related processes is running if at least one of the certain display related processes is running; and reducing the brightness of the display screen if at least one of the certain display related processes is not running without turning the display screen off. As set forth above, Springer merely teaches varying the brightness of individual graphic components on a display screen.

Additionally, the Examiner's piecemeal rejection of independent claims 14, 32, and 33 is clearly based on impermissible hindsight gleaned from Applicant's own disclosure.

Accordingly, the rejection of independent claims 1, 13-14, and 31-33 over Hetzler, Springer, and paragraphs 3-4 of the present application should be withdrawn. Dependent claims 5-12, 15-20, 24-29, 34-39, 43-48, 50-52, 55-56, 59-62, and 69-72 are allowable over Hetzler, Springer, and paragraphs 3-4 of the present application at least for the reasons discussed above

with respect to independent claims 1, 13-14, and 31-33, from which they respectively depend, as well as for their added features.

The Office Action rejected claims 2-3, 21-22, and 40-41 under 35 U.S.C. §103(a) as being unpatentable over Hetzler, Springer, and paragraphs 3-4 of the present application, and further in view of McFedries, (Windows 98 Unleashed, May 12, 1998). The rejection is respectfully traversed.

Dependent claims 2-3, 21-22, and 40-41 are allowable over Hetzler, Springer, and paragraphs 3-4 of the present application at least for the reasons discussed above with respect to independent claims 1, 14, and 33, from which they respectively depend, as well as for their added features. McFedries fails to overcome the deficiencies of Hetzler, Springer, and paragraphs 3-4 of the present application as it is merely cited for allegedly teaching determining information is contained in a registry. Additionally, the Examiner's piecemeal rejection of these claims over four prior art references is clearly based on impermissible hindsight gleaned from Applicant's own disclosure. Accordingly, the rejection of claims 2-3, 21-22, and 40-41 over Hetzler, Springer, paragraphs 3-4 of the present application, and McFedries should be withdrawn.

The Office Action rejected claims 4, 23, 30, 42, 49, 63, 65, 67, and 68 under 35 U.S.C. §103(a) as being unpatentable over Hetzler, Springer, and paragraphs 3-4 of the present application, and further in view of Kardach, U.S. Patent No. 6,018,803. The rejection is respectfully traversed.

Dependent claims 4, 23, 30, 42, 49, 63, 65, and 67-68 are allowable over Hetzler, Springer, and paragraphs 3-4 of the present application at least for the reasons discussed above with respect to independent claims 1, 14, 32, and 33, from which they respectively depend, as well as for their added features. Kardach fails to overcome the deficiencies of Hetzler, as it is merely cited for allegedly teaching determining whether a video process related keyword is contained in a currently operating process (re claims 4, 23, 30, 42, and 49) and wherein the display related processes are indicative of a user watching a video or program on the display (re claims 63, 65, and 67-68). Additionally, the Examiner's piecemeal rejection of these claims over four prior art references is clearly based on impermissible hindsight gleaned from Applicant's own disclosure. Accordingly, the rejection of claims 4, 23, 30, 42, 49, 63, 65, and 67-68 over Hetzler, Springer, paragraphs 3-4 of the present application, and Kardach should be withdrawn.

CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this,

Serial No. 09/853,668
Reply to Office Action of October 28, 2008

Docket No. P-0216

concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

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